

REMARKS

Claims 1 and 3-28 are pending in this application. Claims 11-22 are withdrawn from consideration. By this Amendment, claims 1, 3-5, 9-14, 18, 19 and 21 are amended, claims 23-28 are added, and claim 2 is cancelled. No new matter is added by this Amendment. Support for the language added to claim 1 can be found in original claim 2, and support for new claims 23-28 can be found in original claims 3-5 and 9, respectively.

I. Rejection Under 35 U.S.C. §112

Claims 1-10 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. This rejection is respectfully traversed.

The Patent Office alleges that claims 1-10 are allegedly vague because the term circulation is unclear. The Examiner further alleges that the claims are vague and indefinite because the steps for preparing the solution of step B and the step for preparing a solution comprising an acid is allegedly not clearly described. Applicant respectfully disagrees.

As described in the specification, the circulation refers to solutions that are in a "recirculation" mode. Such solutions circulate on the surface to be treated, i.e., the solutions are driven by a pump, for a desired contact time. In contrast, "washing" refers to solutions that are left completely still for a desired period of time, and the surface to be treated is immersed in such solutions. See page 11, lines 11-20 of the specification. Applicant thus submits that the term "circulation" as recited in claim 1 is definite.

Further, the specification clearly describes the preparation of the solutions recited in the present claims. In particular, the specification describes specific amounts of the product to be dissolved in the solvent, e.g., water. Thus, one of ordinary skill in the art would understand that the solutions recited in the present claims are made by dissolving the solute in the solvent, in any suitable amount. For example, the initial protocol utilizes hemodialysis water as the solvent, and pancreatin, citric acid and sodium carbonate and sodium bicarbonate

as the solutes for the disclosed solutions. See page 20, lines 6-32 of the specification.

Applicant thus submits that the specification defines the method of making each claimed solution.

The Patent Office then rejected claims 3, 4, 5 and 9 as allegedly being indefinite because the recitation "such as" is allegedly unclear. Applicant has deleted the term "such as," along with the limitations following the phrase, in each of these claims (as well as in withdrawn claims 12-14, 18 and 19). Applicant has added new claims 23-28 directed to the limitations deleted from claims 3, 4, 5 and 9.

The Patent Office also rejected claim 10 as allegedly being unclear with respect to "chosen from the group formed by." The Patent Office suggested revising this recitation to instead recite Markush-type language. As suggested by the Patent Office, Applicant has amended claim 10 to recite "selected from the group consisting of." Applicant submits that this rejection is now moot.

For the foregoing reasons, Applicant submits that claims 1 and 3-10 are definite. Reconsideration and withdrawal of the rejection are thus respectfully requested.

II. Rejection Under 35 U.S.C. §102(e)

Claims 1-5 and 7-8 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,777,223 ("Xu"). This rejection is respectfully traversed.

The Patent Office alleges that Xu teaches a method of removing a biofilm comprising carrying out by washing a surface to be treated with (a) the solution comprising an enzyme mixture of proteases, esterases, lipases, galactosidase, and amolase and (b) applying an alkaline solution of detergent containing a surfactant. Applicant respectfully disagrees with the Patent Office's assertion that Xu teaches all of the features recited in claim 1.

Applicant submits that Xu does not teach or suggest preparing and applying, among other solutions, a solution comprising an acid capable of dissolving deposits of mineral salts

as recited in claim 1. Xu makes no mention of any acid capable of dissolving deposits of mineral salts, and being applied to a biofilm.

As such, Xu does not teach or suggest all of the features recited in claim 1. Specifically, Xu does not teach or suggest a method of removing a biofilm that includes preparing and applying a solution comprising an acid capable of dissolving deposits of mineral salts as required in claim 1.

For the foregoing reasons, Applicant submits that Xu does not teach or suggest all of the features recited in claims 1, 3-5 and 7-8. Reconsideration and withdrawal of the rejection are thus respectfully requested.

III. Rejection Under 35 U.S.C. §103(a)

Claims 6 and 9-10 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Xu in view of U.S. Patent No. 6,762,160 ("Barbeau") and U.S. Patent No. 5,238,843 ("Carpenter"). This rejection is respectfully traversed.

Applicant submits that Barbeau and Carpenter, in combination or alone, do not remedy the deficiencies of Xu. Specifically, Applicant submits that neither Barbeau nor Carpenter teaches or suggests a solution comprising an acid capable of dissolving deposits of a mineral salt for use in a method of removing a biofilm as required in claim 1.

As pointed out by the Patent Office, Barbeau teaches a citric acid. However, the citric acid that forms a salt as disclosed by Barbeau is utilized to dislodge divalent cations present in the structure of the biofilm. See column 3, lines 12-18 of Barbeau. The citric acid taught by Barbeau is not capable of dissolving deposits of mineral salts as required of the acid recited in claim 1 as it forms a salt in order to dislodge the divalent cations present in the biofilm.

Moreover, one of ordinary skill in the art would not have been motivated to modify the teachings of Xu with the teachings of Barbeau to achieve the method of removing a

biofilm as recited in claim 1. Xu does not teach or suggest dislodging divalent cations present in the biofilm. Thus one of ordinary skill in the art would not have been motivated to modify Xu to include an acid for dislodging divalent cations in the biofilm as taught by Barbeau.

Carpenter makes no mention of any acid capable of dissolving deposits of mineral salts as required in the present claims.

For the foregoing reasons, Applicant submits that Xu, Barbeau and Carpenter, in combination or alone, do not teach or suggest all of the features recited in claims 6 and 9-10. Reconsideration and withdrawal of the rejection are thus respectfully requested.

IV. Restriction Requirement

Applicant submits that upon allowance of elected claims 1-10 and 23-28, withdrawn claim 11-22 should be rejoined and similarly allowed. Applicant points out that claims 11 and 21 have been revised to include the three solutions recited in claim 1. Thus, Applicants respectfully request reconsideration and withdrawal of the restriction requirement.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1 and 3-28 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

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